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10/788,674	02/27/2004	Archelle Georgiou	UHGS:132US	3594
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EXAMINER				
SQUIRES, ELIZA A				
ART UNIT		PAPER NUMBER		
4156				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/788,674

Applicant(s)

GEORGIU ET AL.

Examiner

Eliza Squires

Art Unit

4156

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date 27 December 2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This communication is in response to the application filed on 27 February 2004.
Claims 1-12 are pending.

Claim Objections

2. **Claims 6 and 10 are objected to because of the following informalities:**
- a. The claim 6 has 2 periods following the term "data", the removal of one is recommended. Appropriate correction is required.
 - b. Claims 6 and 10 should begin with an article such as "A", i.e. the claim should read "A computer-readable medium comprising..." Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claim 8, 10, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

- a. Claim 8 and 10 recites the limitation "the closure of gaps in health care" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.
- b. Claim 12 recites "in different modules, each module..." the second instance of the limitation "module" should be preceded by the term "said" or "the"

an example may be "each of the different modules" or "in different modules, each said module".

5. Claim 12 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 12 recites the limitation "different modules" it is unclear what is meant by the term "module". One of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For the purposes of the examination, a module will be assumed to mean a computer code that performs a specific calculation.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. **Claims 1-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

a. In regards to claims 1-5 and 8-9, a series of steps that could be preformed manually performed steps as directed by the claim are considered abstract, therefore non-statutory, they are also not tied to another statutory class as required by 35 U.S.C 101. In order for a method to be considered a "process" under 35 U.S.C. 101, a claimed process must either: (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials). *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972). If neither of these requirements is met by the claim, the method is not a patent eligible process under 35 U.S.C. 101 and is nonstatutory subject matter. The claims recite no substantive tie to another statutory class in the body of the claims and are therefore rejected.

b. As to claims 6-7 and 10-12, the claims are rejected since they are directed toward data per se as claims 6 and 10 fail to recite in the preamble a connection between the computer readable medium and the computer. Claims 7, 11, and 12 which are dependant upon the claims fail to correct this deficiency and are therefore rejected for the same reasons. Claims to computer-related inventions

that are clearly nonstatutory fall into the same general categories as nonstatutory claims in other arts, namely natural phenomena such as magnetism, and abstract ideas or laws of nature which constitute "descriptive material." Abstract ideas, *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759, or the mere manipulation of abstract ideas, *Schrader*, 22 F.3d at 292-93, 30 USPQ2d at 1457-58, are not patentable. Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data. Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se. *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Proper format should resemble the following:

"A computer readable medium storing a computer program containing instructions thereon for instructing a computer to perform the steps of: ..."

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 1-2 and 4-5** are rejected under 35 U.S.C. 102(b) as being anticipated by “Cost Effectiveness of Highly Active Antiretroviral Therapy in HIV-Infective Patients” by *Sendi et al.*

10. **As to claim 1**, *Sendi* discloses a method comprising:

modeling savings associated with health care services using efficacy data (page 119, left column paragraph 2 and 3), measured results (page 117, right column paragraph 3), economic modeling methodologies (page 1120 figures A and B), and published data (page 1117, right column paragraph 3).

11. **As to claim 2**, *Sendi* discloses a method for modeling savings associated with health care services, comprising:

determining a savings based upon efficacy data from published research (page 119, left column paragraph 2 and 3);

determining a savings based upon measured results, the measured results comprising one or more of the following savings components: productivity/revenue (page 118, left column paragraph 3 and right column paragraphs 1-3 and tables 2 and 3);

determining a savings based upon economic modeling methodologies, the

economic modeling methodologies comprising savings assumptions (table 4); and
determining a savings based upon published data, the published data comprising one or more of the following components: clinical trials or observational data, published cost and savings estimates (page 118, left column paragraph 3 and right column paragraphs 1-3; page 1116, paragraph 3).

12. **As to claim 4**, see the discussion of claim 2, additionally, *Sendi* further discloses The method wherein the efficacy data comprises data concerning one or more of the following conditions: HIV/AIDS (page 1116, left column paragraph 3).

13. **As to claim 5**, see the discussion of claim 2, additionally, *Sendi* discloses the method wherein the savings assumption comprises clinical assumptions or conservative assumptions (page 1117 left column paragraph 3).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. **Claims 3 and 6-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Sendi* in view of U.S. Patent Application 2003/0149596 to *Bost*.

16. **As to claim 3**, *Sendi* teaches the method of claim 2 as noted above but does not explicitly disclose the calculation of a return on investment. In the same field of endeavor, *Bost* discloses the method further comprising calculating a return on investment (ROI) using one or more of the determined savings (abstract and paragraph [0189]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the cost and savings modeling of *Sendi* with the return on investment calculations of *Bost* since it would enable "... organizations and businesses to view health plan differentiation in a familiar paradigm that extends health plan differentiation beyond premium and benefits." (*Bost*; Abstract)

17. **As to claim 6**, *Sendi* discloses a modeling savings associated with health care services using efficacy data (page 119, left column paragraph 2 and 3), measured results (page 117, right column paragraph 3), economic modeling methodologies (page 1120 figures A and B), and published data (page 1117, right column paragraph 3).

However *Sendi* does not explicitly disclose a computer readable medium comprising instructions for modeling. *Bost* discloses a computer readable medium comprising instructions for modeling (paragraph [0009]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the health service cost and savings modeling of *Sendi* with the computer readable medium of *Bost* so that computations can be performed quickly and dynamically on a computer.

18. **As to claim 7**, see the discussion of claim 6, additionally, *Bost* further discloses the medium wherein the instructions being embedded within a computer spreadsheet (paragraph [0009]).

19. **Claims 8-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bost* in view of "A Computerized Reminder System to Increase the Use of Preventive Care for Hospitalized Patients" by *Dexter et al.*

20. **As to claim 8**, *Bost* discloses a method for modeling savings associated with health care services, comprising:

determining a savings arising from the closure of gaps in health care (paragraph [0191], wherein an appointment availability demonstrates a gap in health care);

determining a savings arising from a prospective review for non-covered health services (paragraphs [0161] and [0164] and figure 8); and

determining a savings arising from decreased absenteeism (paragraph [0161]).

However *Bost* does not explicitly disclose a health-related reminder program. *Dexter* discloses determining a savings arising from health-related reminder programs (page 965, left column).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify *Bost* with *Dexter* because as *Dexter* discloses, preventative care leads to decreased medical costs (page 965, left column 5th paragraph) and the use of a reminder program increases the utilization of these measures (page 965, left column 4th paragraph).

21. **As to claim 9**, see the discussion of claim 8, additionally, *Bost* further discloses the method further comprising calculating a return on investment (ROI) using one or more of the determined savings (abstract and paragraph [0189]).

22. **As to claim 10**, *Bost* discloses a computer-readable medium comprising instructions for

determining a savings arising from the closure of gaps in health care;

determining a savings arising from a prospective review for non-covered health services;

determining a savings arising from decreased absenteeism (see the discussion of claim 8 above and paragraph [0009]).

However *Bost* does not explicitly disclose a health-related reminder program. *Dexter* discloses determining a savings arising from health-related reminder programs (page 965, left column).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify *Bost* with *Dexter* because as *Dexter* discloses, preventative care leads to decreased medical costs (page 965, left column 5th paragraph) and the use of a reminder program increases the utilization of these measures (page 965, left column 4th paragraph).

23. **As to claim 11**, see the discussion of claim 10, additionally, *Bost* further discloses the medium wherein the instructions are embedded within a computer spreadsheet (paragraph [0009]).

24. **As to claim 12**, see the discussion of claims 10 and 11, additionally *Bost* discloses the medium wherein the instructions are embedded in different modules, each module corresponding to a different savings component (figure 11 and paragraphs [0192] and [0194]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eliza Squires whose telephone number is (571)270-7052. The examiner can normally be reached on Monday through Friday 8 am - 4 pm Eastern Standard Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Kyle can be reached on 571-272-6746. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eliza Squires/
Examiner, Art Unit 4156
8/21/2008

/Charles R. Kyle/
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